



Net-Zero Communities
Accelerator Program

Energy Mapping Exercise Final Report

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Submitted to:



TOWN OF RIVERVIEW, NB

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About QUEST Canada

QUEST Canada is a registered Canadian charity that supports communities in Canada on their pathway to net-zero. Since 2007, QUEST has been facilitating connections, empowering community champions and advising decision-makers to implement efficient and integrated energy systems that best meet community needs and maximize local opportunities. QUEST develops [tools and resources](#), convene stakeholders and rights holders, and advise decision-makers — all with the goal of encouraging, assisting and enabling communities to contribute to Canada's net-zero goals.

QUEST Canada recognizes communities that have embraced these principles by referring to them as Smart Energy Communities.

Learn more about QUEST Canada and join the network at questcanada.org.

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1.0 EXECUTIVE SUMMARY

What is this Report About?

The Town of Riverview participated in an energy mapping workshop facilitated by QUEST Canada, as part of the [New Brunswick Smart Energy Communities Accelerator](#) Program.

This report summarizes the results of the exercise, including diverse stakeholder perspectives on the opportunities for energy efficiency, waste energy integration, renewable energy, land use and transportation with an eye to reduce energy costs and GHG emissions in the community.

The workshop was attended by 19 participants representing diverse stakeholder groups, including municipal staff, utilities (NB Power and Liberty), representatives from NB Department of Education, TransAqua and local organizations, such as Fundy Biosphere.

Who is It Intended for?

This report is intended to inform the municipal staff, councillors, stakeholders and the broader public about:

- Local strengths, achievements and impacts
- Opportunities to improve energy efficiency, integrate clean energy and improve transport as part of a Community Energy and Emissions Plan (CEEP)
- Targeting of measures and partnership facilitation

What are the Next Steps?

The report is intended to be used to inform future planning decisions. The results can be used to inform the CEEP, or specific projects and initiatives that the municipality or local stakeholders may wish to undertake.

As part of the NB Smart Energy Community Accelerator Program, QUEST Canada also facilitated a CEEP development workshop with the Town of Riverview. The workshop included exercises to develop a community energy vision, set targets and goals, and identify who should be assigned as the lead responsible for each potential action, and which partners need to be involved. The exercises also created an assignment timeline, a target (e.g. percentage of GHG reduction), and identified whether each action needs funding, a study, or supporting policies.

Full Outcomes and findings can be found in the Community Energy and Emissions Plan Development Workshop Final Report – November 2023.

QUEST Canada appreciates the opportunity to work with your municipality and local stakeholders to identify opportunities for integrated community-scale solutions to lower energy costs, reduce GHG emissions, and improve local resilience.

High Level Summary of Key Findings

Based on the results of the pre-survey and the workshop, The Town of Riverview has the following strengths and opportunities to advance community energy and emissions reduction initiatives.

Table 1: Description of strengths and areas for improvement and opportunities

Areas	Key Areas for Improvement and Opportunities
Energy Efficiency	Energy efficiency retrofits for: <ul style="list-style-type: none"> ● Community properties – The Arena, Town Hall, Coverdale Centre, Riverview Mall, churches, future recreation centre, outdoor pool ● Schools – Riverview High School, Elementary School, Riverview East School, Frank L. Bowser School ● Commercial, Industrial properties, and Agricultural operations
Waste and renewable heat	Sources identified: <ul style="list-style-type: none"> ● Municipal wastewater treatment facilities (TransAqua) ● Long-term care facility (Coverdale Road) ● Nav Canada (Old Coach Road) ● Micro-breweries ● Operational Centre at Robertson Street (produced from surplus biomass) End Uses: <ul style="list-style-type: none"> ● Arena ● Operational of TransAqua
Renewable power	Sources: <ul style="list-style-type: none"> ● Solar roof/ ground potential at the TransAqua site ● Solar roof/ ground potential at the Operational Centre ● Biomass from the Operational Centre ● Solar rooftop potential at the Arena ● Wind potential at Moncton Golf Course ● Hydro potential from Mill Creek Dam
Land use	<ul style="list-style-type: none"> ● New residential and mixed-use development areas around Gunningsville and Dickey Boulevard, Suffolk Street, Coverdale Road,

	<ul style="list-style-type: none"> ● High-density housing opportunities near the Goldsboro Avenue, Trites Road, and Bridgedale Boulevard ● Green infrastructure opportunities around: <ul style="list-style-type: none"> ○ Mill Creek Nature Park as carbon inventory ○ Potential Storm Retention Pond location near Lawson Avenue, Findlay Boulevard
Transportation	<ul style="list-style-type: none"> ● Potential New EV charging station at: <ul style="list-style-type: none"> ○ Major destinations (e.g., Rebecca Schofield Accessible Playground on Cleveland Avenue) ○ Town Hall ○ Ops Centre ○ Coverdale Road (Two Level.2 EV chargers planned in 2024) ● A transit network spanning key destinations from Highway 106, Coverdale Road, and Gunningsville Boulevard to the vicinity of the Petticodiac River.
Energy networks	<ul style="list-style-type: none"> ● The TransAqua (wastewater treatment facilities) site and adjacent facilities ● A small industrial area ● The Operational Centre as a potential source for district heating to adjacent facilities ● The area surrounding Arena
Other	<ul style="list-style-type: none"> ● Potential for residential houses and businesses to undertake energy efficiency measures (e.g., rooftop solar, etc) ● Potential for reducing sewer overflow ● Potential growth in residents by 2040 ● Expansion of currently identified sites

2.0 COMMUNITY PROFILE

Situated on the unceded ancestral territory of the Mi'kmaq people, the contemporary Town of Riverview has evolved over centuries through natural and human development. Additionally, it was formed in 1973 through the amalgamation of three smaller villages: Bridgedale, Gunningsville, and Riverview Heights.

Riverview, located in Albert County, New Brunswick, Canada, rests on the southern banks of the Petitcodiac River, across from the larger cities of Moncton and Dieppe. As of 2021, with a population of 20,584, Riverview stands as the fifth-largest municipality in New Brunswick. The town completed a corporate greenhouse gas (GHG) inventory in 2014 and is currently in the process of updating both corporate and community GHG inventories. Additionally, the town has developed a Climate Change Adaptation Plan and an Integrated Community Sustainability Plan.

3.0 COMMUNITY ENERGY AND EMISSIONS MAP EXERCISE RESULTS

Goal

Provide participants with a hands-on energy mapping experience to enable them to share knowledge, discuss local opportunities and apply basic techniques for identifying opportunities in a spatial context, including planning local efficiency, clean energy, transportation, and land use actions.

Overview

The map exercise engaged multiple stakeholders, using a digital tool called Mural, to identify opportunities for their Community Energy and Emissions Plan and initiatives. The exercise enabled participants to denote these opportunities, and discuss various aspects and viewpoints. Here is a summary of the exercise:

Summary of Results

1. Energy Efficiency

Using green stars and circles, the participants identified potential buildings and neighbourhoods for energy efficiency improvements. **These are listed here:**

- The Town's arena could be a site for energy efficiency upgrades
- Town Hall: an opportunity to lead by example with energy efficiency upgrades

- Coverdale Centre on Runnymede Road: an opportunity to lead by example with energy efficiency upgrades
- Riverview Mall: an opportunity to lead by example with energy efficiency upgrades
- Churches in the neighbourhood have great potential for retrofitting or the installation of renewable sources, such as solar PV
- The future recreation centre around Bridgedale Boulevard could be designed as net-zero/carbon-neutral buildings
- The outdoor pool site (near Findlay Boulevard) has potential for energy efficiency upgrades and could be a future net-zero site in the future
- Schools—Riverview High School, Elementary School, Riverview East School, and Frank L. Bowser School sites—have the potential for energy efficiency upgrades.
- Older apartments near the Town Hall could serve as sites for energy efficiency retrofits
- The Operational Centre near Mill Creek Nature Park is a site with the potential for energy efficiency upgrades and could be a future net-zero site
- The Suffolk Street Overflow Parking Lot could be developed as a site for a net-zero building
- Agricultural operations around Mitton and Turtle Creek Road can benefit from retrofit opportunities

2. Waste and Renewable Heat

Using red stickers and stars, the participants identified potential waste and renewable heat opportunities. **These are listed here:**

- Municipal wastewater treatment facilities (TransAqua) are a potential waste heat source
- The long-term care facility on Coverdale Road is a potential waste heat source
- Nav Canada on Old Coach Road is a potential waste heat source
- Micro-breweries in the neighbourhood are potential waste heat sources
- The Operational Centre at Robertson Street (produced from surplus biomass) is a potential waste heat source

3. Renewable Power

Using green stickers and stars, the participants identified opportunities to integrate renewable power. **These are listed here:**

- Solar roof/ ground potential at the TransAqua site on Hillsborough Rd
- Solar roof/ ground potential at the Operational Centre (near Mill Creek Nature Park)
- Biomass from the Operational Centre
- Solar rooftop potential at the Arena
- Wind potential at Moncton Golf Course
- Hydro potential from Mill Creek Dam

- New developments potential for solar energy: Gunningsville Boulevard, Dickey Boulevard, Bridgedale Boulevard, Coverdale Boulevard (Wholy Whale site), Suffolk Street, area near Old Kent Building,

4. Land Use

Using various colors of shading, participants identified zones for densification, mixed-use, and restricted development. **These are listed here:**

- Wholy Whale Site on Coverdale Road: Potential for multi-residential development
- New residential and mixed-use development areas around Gunningsville and Dickey Boulevard, Suffolk Street, Coverdale Road,
- High-density housing opportunities near the Goldsboro Avenue, Trites Road, and Bridgedale Boulevard
- Green infrastructure opportunities around Mill Creek Nature Park as carbon inventory
- Potential Storm Retention Pond location near Lawson Avenue, Findlay Boulevard

5. Transportation

Using yellow stickers, purple lines, and blue stars participants identified opportunities for transit amenities, EV charging, trail connectivity and inter-modal hubs. **These are listed here:**

- Potential New EV charging station at Major destinations (e.g., Rebecca Schofield Accessible Playground on Cleveland Avenue), the Town Hall and The Operational Centre near Mill Creek Nature Park
- Installation for two Level.2 EV chargers planned in 2024 on Coverdale Road
- A transit network spanning key destinations from Highway 106, Coverdale Road, and Gunningsville Boulevard to the vicinity of the Petticodiac River.

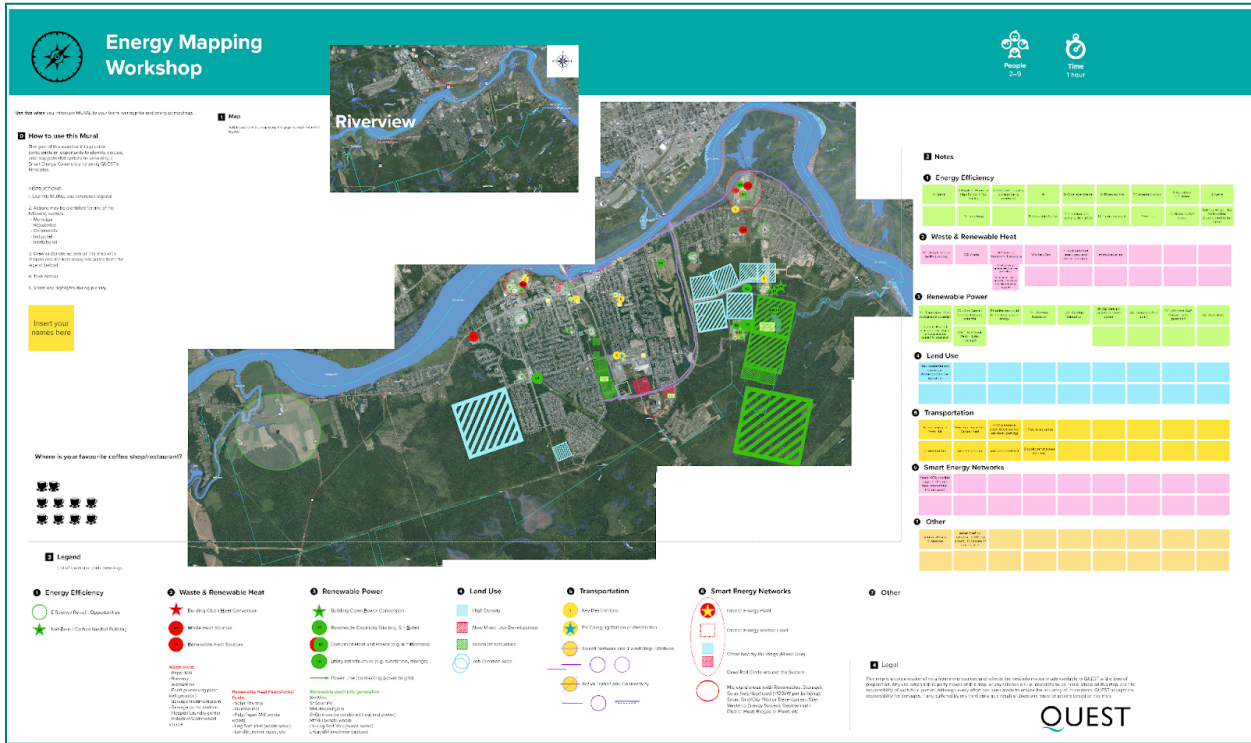
6. Smart Energy Networks

Using a red marker and yellow stars, participants identified potential opportunities for district energy and district heat.

- The TransAqua (wastewater treatment facilities) site on Hillsborough Rd as a source for adjacent facilities
- A small industrial area near Tassy Crescent and Quinn Court as potential site for smart energy network, however, it is still uncertain what recovery options are available
- The Operational Centre as a potential source for district heating to adjacent facilities
- The area surrounding the Town's Arena

7. Map Images (photos of marked-up maps, and of the exercise)

Map 1:



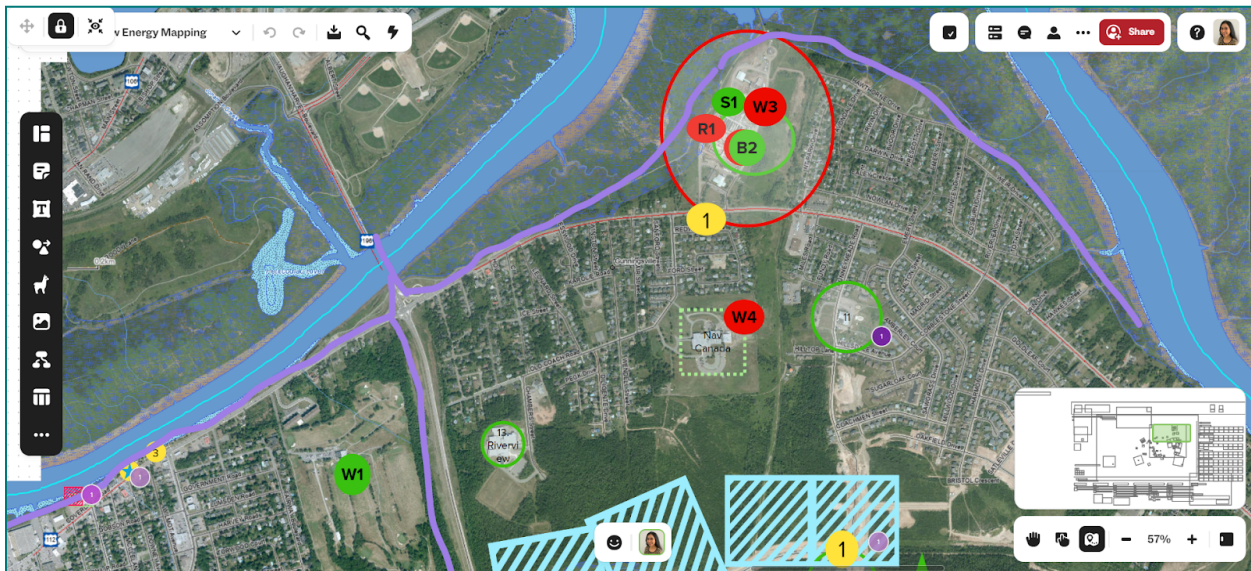
Energy Mapping Workshop

How to use this Map

Legend

- Energy Efficiency**
 - Classroom, Offices, etc.
 - Lighting
- Waste & Renewable Heat**
 - Boiler/Chiller/Heat Exchanger
 - Waste Heat to Reuse
 - Renewable Heat Sources
- Renewable Power**
 - Building Co-located Generation
 - Renewable Co-located Storage (e.g. Solar)
 - Co-located generation (e.g. Solar, Wind)
 - Utility Interconnect (e.g. Hydrogen, Storage)
- Land Use**
 - High Density
 - Medium Density
 - Low Density
- Transportation**
 - Bus Stop
 - Light Rail Station
 - Other
- Smart Energy Networks**
 - Microgrid
 - Other
- Other**

Image 2:



Energy Mapping

Map showing Riverview area with energy markers: W1, R1, S1, W3, B2, W4, 1.

Image.3:

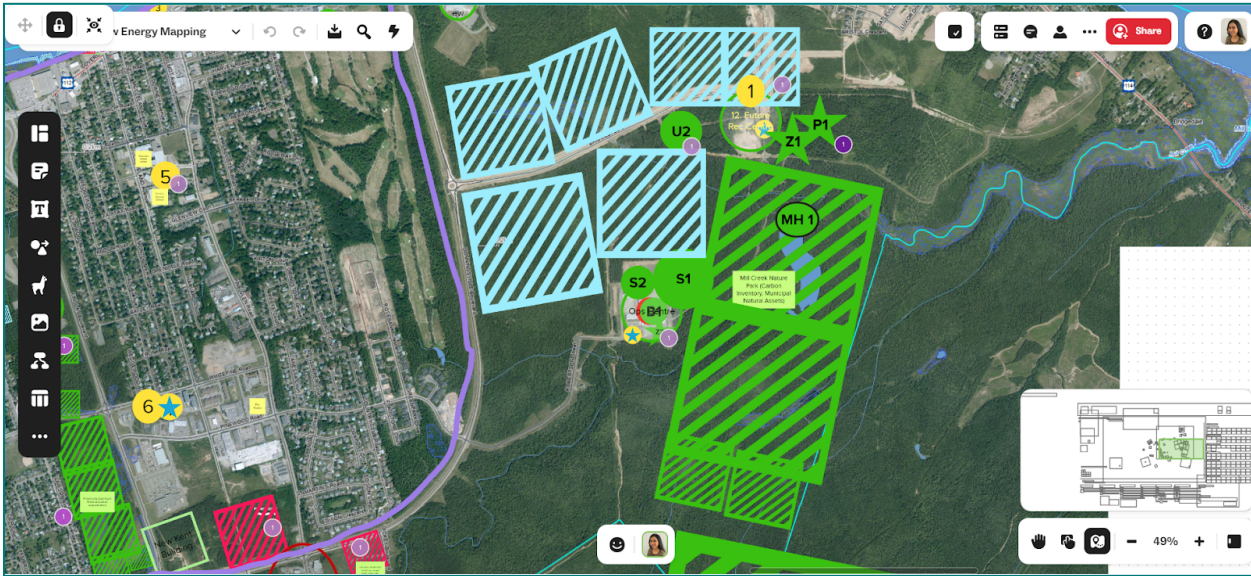


Image.4:

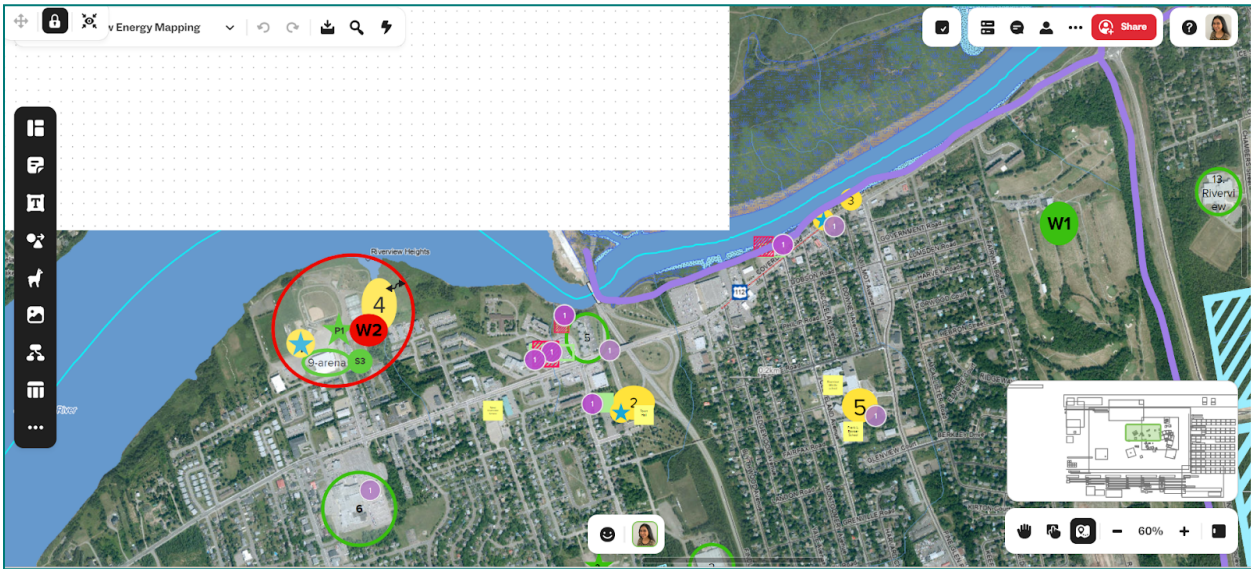


Image.5:

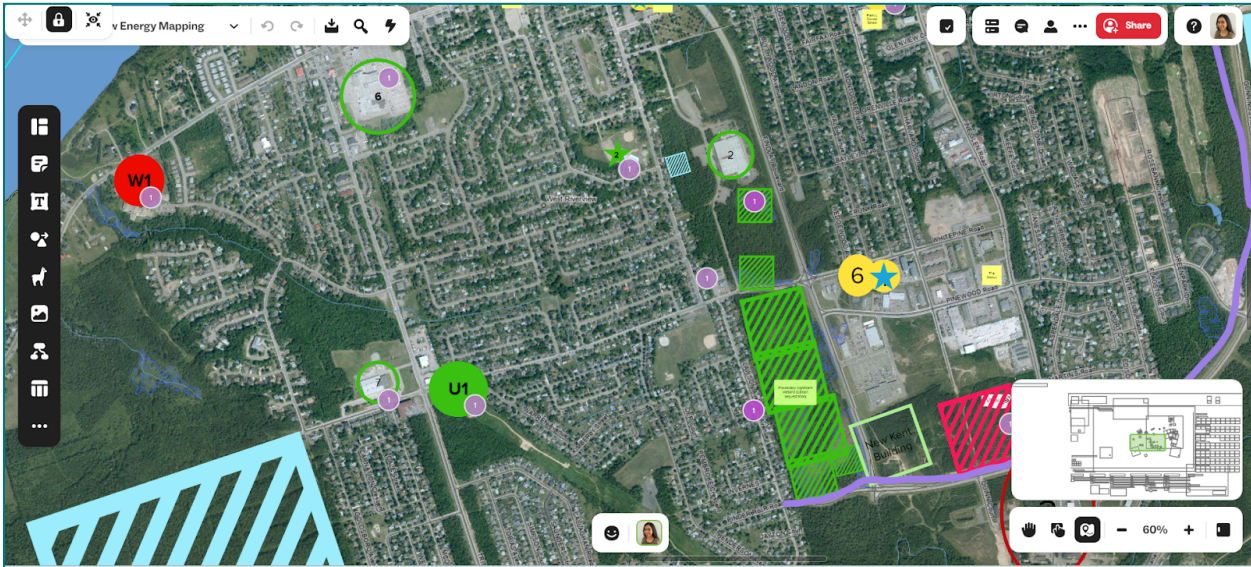
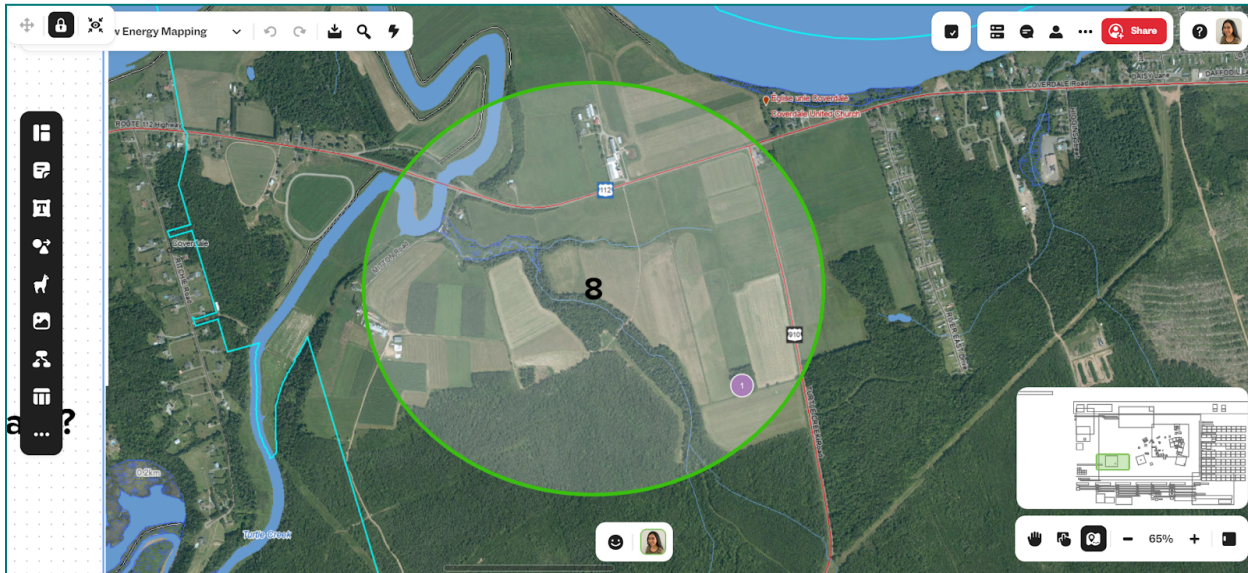


Image.6:



Image.7:



Disclaimer: Maps were produced with best available data at the time. Decisions based on map information should be taken into context, and QUEST Canada will not take responsibility for any damages caused by decisions made based on these maps.

5.0 SUMMARY OF RESULTS

5.1. Summary

The Town of Riverview participated in a community energy and emissions mapping workshop facilitated by QUEST Canada, as part of the [New Brunswick Smart Energy Community Accelerator Extension Program](#). The workshop engaged diverse stakeholders and municipal staff, including through a map-based exercise where participants could identify local assets and strengths, as well as opportunities around energy efficiency, clean energy, transportation, land use and more. These opportunities were denoted on the map and discussed. The process ensured diverse viewpoints could be captured, and helped to establish a vision for a smart energy community. The key findings can be used to inform a CEEP, and pursue specific community energy and emissions initiatives.

5.2. Summary of Key Strengths and Things in Place

Through this workshop a number of local assets and strengths were identified. Here is a list of strengths:

- The town has an engaged and committed group of leaders interested in furthering the planning and action on smart energy initiatives in Riverview
- The mapping exercise illuminated several locations of significance within the community where smart energy activities could be implemented with great value to the community as a whole, such as the transit lines, EV stations, and solar and wind energy potential in various locations
- With the information gleaned during this workshop, the community is well-positioned to enhance energy efficiency, renewable energy or transportation plans for that area before the development plans are finalized

5.3. Opportunities Identified

Through this workshop a number of opportunities were identified:

- The Town and TransAqua could further explore the actions that came to light during the mapping workshop, particularly heat recovery opportunities and solar energy opportunities.
- The Town and partners involved can follow the energy decision-making hierarchy to determine next actions
- The Town may review policies and ensure/develop alignment to the Town's energy plan (e.g. land use, climate change, sustainability plan etc.)
- The Town could continue to participate in the remaining activities in QUEST's Smart Energy, Community Accelerator Program — Implementation workshops, and any relevant webinars
- The Town may continue building relationships with key partners/stakeholders in the community
- The Town may encourage greener housing, reducing heating/cooling by improved home insulation and optimised new building positioning. This can be done through education campaigns, permit requirements/incentives, or a community efficiency financing program

- The Town can encourage the integration of local, renewable, and conventional energy sources to meet community energy needs. This can include capturing and using waste energy in the community and increased use of solar options and/or wind energy
- The Town may encourage the electrification of transportation (e.g. charging stations), increase options for non-motorized transportation, and promote sharing of transportation (e.g. car share)
- The Town may consider land-use patterns that improve energy efficiency and reduce commuting, e.g. densification of the downtown core, Water Street, and new mixed-use developments
- The Town may create an awareness campaign about their intention to become a greener, more sustainable community. Every resident, business, and the Town itself can play a role in reducing energy consumption. The Town can promote the programs outlined by NB Power and communicate on the subject of sustainability through its website, social media, and newsletter. This can include constant reminders of ways to save energy. People seeing action toward savings will help
- The town can track energy consumption levels and communicate their changes. The more the community is involved and can share their energy-saving actions, the better
- The town can seek financial resources for implementing smart energy action items, including funds to mobilize financing initiatives that will help the community get started

5.4. Next Steps

The report can be used to inform future planning decisions, build on the Climate Change Action Plan/Community Energy and Emissions Plan, and help spur specific projects/initiatives that the municipality or local stakeholders may wish to undertake.

As part of the NB Smart Energy Community Accelerator Program, QUEST Canada also facilitated a CEEP development workshop with the Town. The workshops included exercises to develop a community energy vision, set targets and goals, and identify who should be assigned as the lead responsible for each potential action and which partners need to be involved. The exercises also created an assignment timeline, a target (e.g. percentage of GHG reduction), and identified whether each action needs funding, a study, or supporting policies.

6.0 CONCLUSION

This report highlights the consolidated results of the energy mapping exercise, for the Town of Riverview, and identified opportunities for their CEEP, including for energy efficiency, harnessing local energy opportunities, improving land use, transportation, and more. Key findings can help inform your next steps, such as creating a CEEP and vision for a smart energy community.

QUEST Canada looks forward continued collaboration with the Town of Riverview as part of the NB Smart Energy Community Accelerator Program. For any further information about this report or the Accelerator Program, please contact us at info@questcanada.org.

7.0 ANNEXES

1. Participant List

Name	Title	Organization	Email or Phone
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